Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application:

1-46. (*cancelled*).

47. (*currently amended*) An apparatus, comprising:

a carousel comprising a base;

a plurality of liquid conduits formed within said carousel; and

a plurality of reaction mounts removably insertable onto said plurality of liquid conduits, wherein each liquid conduit forms a chamber below a corresponding reaction mount, wherein at least one of said plurality of reaction mounts includes a plurality of wells formed therein, said plurality of wells configured to simultaneously communicate with the chamber formed by said liquid conduit, and wherein at least one of said plurality of reaction mounts is adapted to receive at least one of a plurality of reagents for synthesizing a polymer.

48. (*canceled*).

49. (*previously presented*) The apparatus of claim 47, further comprising:

a plurality of exit ports protruding from said base of said carousel, wherein each exit port enables drainage from a corresponding liquid conduit.

50. (*previously presented*) The apparatus of claim 49, further comprising:

at least one engagement port positioned under said carousel, wherein said at least one engagement port is raised or lowered to engage or disengage with at least one of said plurality of exit ports, wherein said at least one engagement port is connected to a vacuum line adapted to drain liquid from the engaged exit port.

51. (*previously presented*) The apparatus of claim 47, further comprising:

a plurality of stations positioned above said carousel, wherein said stations perform one or more physical steps selected from the group consisting of fluid delivery, fluid incubation, fluid drainage, temperature control, and optical analysis.

52. (*previously presented*) The apparatus of claim 51, wherein at least one of said plurality of stations is a dispensing module adapted to deliver at least one of said plurality of reagents for synthesizing said polymer to at least one of said plurality of reaction mounts.

53. (*currently amended*) An apparatus, comprising:

a carousel having a plurality of reaction mounts coupled to a first side and a plurality of exit ports protruding from a second side, wherein at least one of said plurality of reaction mounts includes a plurality of reaction wells, wherein each exit port communicates with a corresponding reaction mount and said plurality of reaction wells of said reaction mount simultaneously communicate with the corresponding exit port ~~adapted to receive at least one reagent from a plurality of reagents for synthesizing a polymer~~;

at least one engagement port positioned under said carousel, wherein said at least one engagement port is raised or lowered to engage or disengage with at least one of said plurality of exit ports, wherein said at least one engagement port is connected to a vacuum line adapted to drain liquid from the engaged exit port; and

~~a plurality of liquid conduits formed within said carousel, wherein each liquid conduit forms a chamber below a corresponding reaction mount, and wherein at least one of said plurality of reaction mounts is adapted to receive at least one of a plurality of reagents for synthesizing a polymer~~.

54. (*currently amended*) The apparatus of claim 53, further comprising:

a plurality of liquid conduits formed within said carousel, wherein said plurality of reaction mounts are removably insertable onto said plurality of liquid conduits, wherein each liquid conduit forms a chamber below a corresponding reaction mount, and wherein each of said plurality of exit ports enables drainage from a corresponding liquid conduit.

55. (*previously presented*) The apparatus of claim 53, further comprising:

a plurality of stations positioned above said carousel, wherein said stations perform one or more physical steps selected from the group consisting of fluid delivery, fluid incubation, fluid drainage, temperature control, and optical analysis.

56. (*currently amended*) An apparatus, comprising:

a carousel comprising a base and having a plurality of reaction mounts removably insertable onto a plurality of liquid conduits, wherein each liquid conduit forms a chamber below a corresponding reaction mount, wherein at least one of said plurality of reaction mounts includes a plurality of reaction wells, said reaction wells configured to simultaneously communicate with the chamber formed by said liquid conduit ~~wherein at least one of said plurality of reaction mounts is adapted to receive at least one of a plurality of reagents for synthesizing a polymer~~; and

a plurality of stations positioned above said carousel, wherein said stations perform one or more physical steps selected from the group consisting of fluid delivery, fluid incubation, temperature control, and optical analysis.

57. (*previously presented*) The apparatus of claim 56, wherein at least one of said plurality of stations is a dispensing module adapted to deliver said at least one of a plurality of reagents for synthesizing said polymer to at least one of said plurality of reaction mounts.

58. (*cancelled*).

59. (*currently amended*) The apparatus of claim 58, wherein said dispensing module moves radially relative to said carousel and is adapted to deliver a fluid to each of said plurality of reaction ~~well~~ wells.

60. (*previously presented*) The apparatus of claim 56, wherein at least one of said plurality of stations is a temperature controller adapted to regulate temperature at a reaction mount from said plurality of reaction mounts.

61. (*previously presented*) The apparatus of claim 56, wherein at least one of said plurality of stations is an optical analyzer adapted to analyze said polymer synthesis occurring at a reaction mount from said plurality of reaction mounts.

62. (*previously presented*) The apparatus of claim 56, further comprising:

a plurality of exit ports protruding from said base of said carousel, wherein each exit port enables drainage from a corresponding liquid conduit.

63. (*previously presented*) The apparatus of claim 62, further comprising:

at least one engagement port positioned under said carousel, wherein said at least one engagement port is raised or lowered to engage or disengage with at least one of said plurality of exit ports, wherein said at least one engagement port is connected to a vacuum line adapted to drain liquid from the engaged exit port.